

# ORAL HYGIENE

## A JOURNAL FOR DENTISTS

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### ORAL HYGIENE IN OKLAHOMA

#### Some Pertinent Observations

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The writer is State Chairman of the Oral Hygiene Committee of the State Dental Society, and after reading this interesting article you will agree with me that they have done some most excellent work. Why can't you do the same in your State? The writer thinks the lectures of more importance than examinations. Do you agree with this? I have examined the "Course of Study" book, and it is mighty good and I advise you to write for a copy. But be sure and inclose postage. The author's observations on society organization and the benefits to be derived from a smaller number of trained and truly professional men as members rather than a larger number who do not measure up to standard might be ideal, but it would not work out. The profession, as a whole, cannot advance unless the men of the lower standard advance with it. Get these men in your society and do them all the good you can. Even an army in the field must take care of its injured and crippled. The only other way is to shoot them. We can't do this, the law won't allow it. Then, again, they are our brothers. No matter how they got in, the fact remains they are in and we must help educate them to a higher standard.

When launching a reform movement that does violence to habit, contends with prejudice based upon ignorance and stirs apathy to action, a year and a half is not a great deal of time, when the movement is carried on by only a handful of busy men whose only compensation is that which comes from a consciousness of doing good to humanity.

The fact that our State School Board, including a

progressive State Superintendent, and our State Board of Health are coöperating with us in this great oral hygiene campaign, is evidence, not only of the general interest aroused, but of progress being made.

While the general results are not what we would wish, it is sufficient to warrant our believing that a brief resume of oral hygiene activities in Oklahoma will prove of interest, and we trust, give inspi-

ration and encouragement to others who, just beginning, are unselfishly giving time and labor to this holy work.

When this campaign was launched oral hygiene was about as well understood by the laity as are the principles of extension for prevention in cavity preparation, and when we consider that Oklahoma was composed of two territories without dental laws, up to within a few years ago, therefore, the unwelcome recipients of many so-called dentists who were forced to discontinue practice in thirty or forty states, whose new laws compelled this gentry to discontinue practice, we feel that we have a right to be proud of what has been accomplished.

During the past summer lectures have been presented to County Institutes and State Normals so that over thirty counties have been reached. More than two thousand teachers pledged themselves to start the tooth brush drill in their schools.

To illustrate the good accomplished, let us briefly consider one county. Last June a lecture was delivered to their County Institute. The local school board was sufficiently impressed to extend a most cordial invitation for the speaker to return after school opened to present the subject to the school children and at night to the people. Two weeks ago that engagement was filled.

All of the children from the fourth grade down were

marched to the opera house in the morning where their attention was held for forty-five minutes. In the afternoon we lectured to all of the pupils from the fourth grade up, including the high school. They also were marched to the opera house, completely filling it. This lecture lasted fifty-five minutes and, of course, was different from the morning lecture. At night the lecture, of an hour and a half, was to the parents, when stereopticon slides were used. The County Superintendent attended all three lectures and has since sent a letter of oral hygiene instructions to each teacher in the county.

During the superintendent's introduction of the speaker he asked the children how many of them had used the tooth brush that morning. Fully ninety per cent. of them raised their hands. This was the direct result of the lecture given to the teachers in the summer.

This superintendent has called a meeting of the school board, the druggists, the physicians and the dentists. The druggists agreed to sell a good brush and tube of paste to each child for twenty-five cents. The physicians agreed to take care of the throat and other troubles free for those whose parents could not pay, the dentists agreeing to do the same in their line. Two days after this meeting the druggists had exhausted their stock of brushes. The tooth brush drill is now a part of the school work.

Where is the man who is entitled to the degree of Doctor of Dental Surgery who will not agree that the future citizenship of that country will be far better and on a much higher plane from every standpoint, by virtue of this work?

At the invitation of our State Board of Health we prepared an oral hygiene exhibit that was sufficiently complete to furnish subject matter for a complete lecture. This exhibit has been taken to a number of towns and cities in the state where suitable lectures were given by local dentists. This was brought to the State Fair where lectures were given each afternoon by local men, suitable literature being given to those interested.

At our annual "Better Babies Contest" during the fair, it was noticed that there were fewer discolored teeth than a year ago.

Our State University, taking cognizance of the importance of the work, has purchased a stereopticon lantern for our use.

There seems to be a wide spread opinion that the examination of the mouths of school children, sending to the parents a chart showing what work is needed, is a very important initial step in this work. While I agree that this is important and productive of much good, still I am convinced that the same amount of time and energy could be better expended in delivering suitable lectures to the school

children. Simply the examination of the mouth, telling the children that needed work should be done, the children in turn repeating that to the parents, and showing the chart, does not bring the definite and actual results as do the lectures.

It is not difficult to impress the children with the *why* in lectures, and when this is done you are going to get quicker action. The children will carry the message home just the same as though their teeth had been examined and they will begin using the tooth brush, which is the principal thing we are after.

While the correction of faulty conditions is important, it is of greater moment that we emphasize prevention, so if it is not feasible to construct an elaborate machine for making these examinations, carefully charting the results and, conducting the lectures, too, I believe it is best to confine the work to the lectures.

Again, to go into a school and make examinations the class work is disturbed. This is also true in delivering lectures. All this means a heavy draft on the patience and forbearance, or let us say patriotism, of the teachers and school board.

In our lecture work here we adopted this plan. We arranged with the principal to lecture at an hour that best suited their convenience. They put two and sometimes three rooms together. In introducing the speaker his name

would be omitted, thus giving the speaker an opportunity to disarm the children and the parents of the very prevalent belief that we were doing this simply to increase our business. The same plan being followed when addressing school patrons' clubs.

The State School Board issues a book which is an outline of all subjects to be taught and the manner in which it should be taught. This is called the "Course of Study" book. This is the official guide for all teachers of the state, except in the cities of the first class. The State Superintendent permitted us to prepare several pages of instructions to teachers for this book. The same matter was published in pamphlet form to be placed in the hands of the teachers in cities of the first class, so that every teacher in the state has this matter as part of their official instructions. (Anyone desiring a copy of this will receive one upon application.)

I would not consider this article complete did I not call attention to the fact that if we are to carry out the true spirit of the doctrine and principles of oral hygiene, we should begin at home. What per cent. of the dentists sterilize their instruments? What per cent. set bridges, crowns and inlays with so perfect a fit at the gingival that there is no place for lodgment of food? What per cent. will do the most common of all dental practice, the filling of teeth with amalgam so per-

fectly that there are no rough margins that defy even a skillfully used tooth brush?

We have made wonderful strides throughout the United States in this oral hygiene movement, but I am impressed with the belief that the foundation has been faulty. We should at least have started a campaign to do what we could toward correcting these deplorable conditions that we know exist in our profession before reaching that place where all of our energies and efforts were directed toward the laity.

Why is it some of our leading men do not vigorously push a campaign along these lines? Why do we not have strong lectures and addresses in our dental meetings courageously contending for more sanitary work in our own profession? It is true there are those who have so commercialized their work that they are really indifferent to the welfare of their patients. This class cannot be reached or influenced, but there is another class of men who can be reached and influenced by such a campaign.

It does seem to me that the time is ripe for the profession, as a profession, to take cognizance of this condition and make such a vigorous fight against the men who do such careless work that we will soon be able to draw the line of demarkation between the Doctors of Dental Surgery and mere "tooth carpenters," and I would let that line be the line of demarkation for



membership in our societies.

Would it not be infinitely better to have a dental society made smaller but composed of professional men (and I use this term in its true sense), rather than for the standard to be so low that any man who has a license, and a *technical* right, may become a member in good standing? Would it not be better for the profession and the people who place confidence in us, to place our society on such a plane that the professional man would feel that it was an honor to be a member?

The motive back of the wide open gate (except to the advertiser), is altruistic, and I am in sympathy with it so long as we do not carry the experiment to such an extent

that the load becomes too heavy as a result.

What a potent factor for good to us and the people if we take the necessary steps to clean our own door yard while so vigorously exhorting the laity. To some, all this may seem harsh and lacking in the spirit of brotherly love. Let me firmly declare that it is my love for humanity, particularly our school children, that actuates me in this matter, even though I incur the displeasure of some of the dentists by taking this stand. I love my profession and my professional brothers; I also love the school children and will do what I can to protect them. My whole contention is based on a spirit of fairness.

## ILLUSTRATED LECTURES ON MOUTH HYGIENE

The National Mouth Hygiene Association have in preparation a series of lectures on mouth hygiene, which will be furnished members of state dental societies and others, who may be considered competent to present such a lecture to the public, at a rental fee of One Dollar (\$1.00) per use.

The first lecture, a talk suitable for a mixed audience of school pupils above the age of twelve years, is now ready.

This should enable any dentist of average oratorical ability to meet the lecture needs of his community at very slight expense and without the necessity of spending hours of valuable time in its preparation.

Further particulars and application blanks will be furnished on request to the Director of Extension Lectures of the Association. Edwin M. Kent, D.M.D., 222 Washington street, Brookline, Mass., U. S. A.

WHAT the fool does in the end  
the wise man does in the beginning.—Spanish.

LEARNING to have and wisdom  
to lack is a load of books on a  
donkey's back.—Oriental.

## EXCESSIVE USE OF ANTISEPTICS

S. D. RUGGLES, D.D.S., Portsmouth, Ohio

This paper is rather out of the ordinary in subject and treatment. It is well worth reading.

Read before the Columbus, Ohio, Dental Society, May 27, 1914.

After reviewing the wonderful progress made in the various departments of dental science, I am almost persuaded to believe that less headway has been made in the therapeutics of our work than in any other single department. Some of the stumbling blocks of a decade or two ago have been successfully overcome and the great mass of humanity materially benefited. Not until a year or so ago was the dental profession aware of its utter lack of definite therapeutic knowledge when it remained for the stimulus to action to come from a member of the medical profession. I refer to the remarks of Dr. Mayo made at the banquet in honor of Dr. G. V. Black, of Chicago.

No doubt much of our tardiness in this field has been due to the lack of funds, since endowments for research along dental lines have been remarkably infrequent. That the profession has men capable of pursuing scientific research is now definitely established. May their hands be upheld by financial support from those of us not qualified to do the actual research work! Investigations which call for such unremitting toil should not be expect-

ed gratuitously but the burden should be borne by the profession at large. Now that men like Hartzell, Pinz, Buckley and others are actively engaged in solving problems of a definite character, it should not be possible to make such an accusation again.

The subject under consideration is too extensive for treatment in a single paper except in a general and superficial manner. It is not my purpose to deal with the relative efficiency of the different drugs commonly found in our cabinets, but in a general way to indicate some of the essential points to be borne in mind in their use and abuse.

According to Cushny drugs act in one of two ways: either through their physical properties, such as oil applied to abraided surfaces to prevent the evaporation of fluids or in the osmotic action of salts, and by their chemical affinity for living matter. "The latter constitutes the function of the majority of our drugs. No doubt they form but temporary combinations with the protoplasm and alter the functions of all cells susceptible to their action. However, the action of drugs is quantitative and not

qualitative. Stimulation is used to increase the specialized function of a cell, while irritation on the other hand is used rather in reference to the changes in the conditions common to all forms of living matter. This indicates a change in the nutrition and growth of cells rather than in specialized functions."

In prolonged stimulation the protoplasm generally becomes depressed and loses its activity (paralysis), while some authorities claim that depression is invariably preceded by stimulation and if prolonged leads to depression and paralysis. An excessive dose of a stimulating poison usually leads to death or paralysis. The cell becomes functionally dead, but under certain conditions may recover. Excessive irritation on the other hand leads to actual death and disintegration. An abscess usually follows. Most drugs have an elective affinity for definite tissues. No poison is known that acts equally on all organs and tissues. Those which have a wide field of operation are known as protoplasm poisons. A great majority of the drugs applied locally never get into the general circulation, therefore we have escaped many serious consequences.

At the present time we are entering upon a new era in the treatment of disease, or rather I should say the universal application of a method practiced years ago by Pasteur and Koch. The researches of Vaughn and oth-

ers have materially changed the treatment of disease and ere long the general practitioner of dentistry will realize more than ever before that he is a specialist in the great field of medicine. No longer will he be content with the local application of drugs which yield questionable, if any beneficial, results.

The new theory of infection advanced by Vaughn differs so radically from what we believed a decade ago, that our whole fabric has to be made over. The realistic pictures of struggles of soldiers arrayed as in battle no longer holds good, for now we know that bacteria whether dead or alive are equally dangerous. It is the toxins, or rather the endo-toxins, which kill, and how can you counteract their action with drugs? Dr. Cook, in a paper before the Northern Ohio Society last year, stated that it was through the study of biological chemistry that the dentist will get a thorough understanding of a particular drug for a certain disease process. In the light of our present knowledge, we are at best making a guess when applying drugs in the customary way. Because practice has been based on this false premise, it is difficult to realize that living cells more often succumb to our treatments before the bacteria are affected. Especially is this true when we but pause to realize that most bacteria behave differently in different surroundings. Many very

harmless bacteria have a facultative property which we are not able to recognize, except that of increased activity when we logically expect the reverse. A certain strain of bacteria will be mild from one culture and virulent from another.

How unfortunate that so little definite information is at hand concerning the action on cell life of the many drugs used daily by the dentist! In an effort to ascertain the actual changes occurring to cell life when iodine is applied topically, not even the U. S. government at Washington with all its equipment could enlighten me. The big universities where extensive laboratories are maintained could not answer the question. However, a good report is issued on the various stains used for histological work.

Years ago we looked to phenol as the great antiseptic; today no reputable surgeon allows it to touch a wound, yet I dare say that dentists all over this broad land are sealing it in root canals. As stated elsewhere in this paper, prolonged stimulation or irritation leads to death. The constant application of this and other drugs to delicate membranes means not recovery, but death. The great popularity of the essential oils has become a thing of the past. They are not only relatively low in their ability to destroy bacteria, but are actual irritants when constantly used. Oil of cassia,

for instance, is almost as destructive to cell life as capsi-cum. The craze for antiseptics in all forms is perhaps a natural outgrowth of the times, but the day is not far distant when the pendulum will swing back and due recognition be given to the old principle of mechanical removal. Why should the mouth be dosed daily with drugs when the very cause—debris—still remains and defies all agents which a mucous membrane will tolerate? The intelligent use of brush and floss is more effective than all other means combined. The manufacturers of this country have been allowed too much liberty in marketing their wares and the indifference of men whose duty it is to teach the public, has not a little to do with their success. One of the most commonly advertised preparations on the market today, and I might say found in almost every bathroom, should never be used except upon a prescription of one fully aware of its deleterious effect. I refer to peroxide of hydrogen; while a most efficient remedy under certain conditions, it is not without its dangers. The ordinary article purchased in the market contains about five per cent of free hydrochloride acid. Many times have you seen the beautiful polish of enamel absent in the mouths of young subjects and little suspected the cause. After all has been said, can you tell me why the mouth should be

washed continually day after day with an endless list of drugs, when the nose, throat and entire intestinal tract is not?

It is not my purpose to "turn the world upside down" but rather to have my small say in the righting it. We are upset too much already. A few observations in the big hospitals have been of great benefit to me, and I shall pass them on to you for your consideration. I have witnessed laparotomies performed by great surgeons and no antiseptics used in the wound. Yes, infected fields were washed with normal salt solutions and nothing else. What is more, no less an authority than G. V. Black says that a mouth can be as effectually cleansed with a spray of nor-

mal salt solution under pressure as with peroxide of hydrogen.

While the local application of drugs may, or may not, enter the general circulation, it is well to have in mind that continued irritation may become a means of retarding repair instead of increasing it. The opsonic index of the patient or the bodily resistance to infections is aided by correct knowledge of all conditions tending to assist it. Frequently, a local condition may clear up, yet the entire system still shows signs of its evil effects. When we place less dependence in drugs and pay more attention to the end products of tissue waste, we will come nearer solving the riddle of medicine.

## THE INTERNATIONAL DENTAL FEDERATION MEETING

H. J. BURKHART, D.D.S., Batavia, N.Y.

*The writer draws attention to the importance of this little known and often misunderstood organization. We are honored in having an American dentist as President, the first time in the history of the Federation.*

The International Dental Federation was called to order at 10 A. M. on Monday, August 3, 1914, in Jehangir Hall, in the University of London, by the President, Dr. W. B. Patison, of London. Addresses were delivered by representatives from the various countries holding membership in the Federation. The first was by the President and was a résumé of the work of the Federation together with

suggestions and recommendations for future work. This was followed by brief addresses from Drs. Brophy and Kirk on behalf of the United States, Dr. Guerrini of Italy, Dr. White of Australia, Dr. Pickerill of New Zealand, Dr. Burnett of Uruguay, and many others.

The session was closed by address from the Vice-Chancellor of the University of London, who spoke in a most appreciative way of the

advance in dental science. The routine business of the Federation was transacted by the Executive Council between sessions of the Congress. Many matters of general interest were discussed and considerable progress made in arriving at a better international understanding. The closing session of the Federation was held in the Hotel Cecil, when the following officers were elected for five years:

President—Dr. Truman W. Brophy, of Chicago.

Secretary - General — Dr. Aguilar, of Madrid.

Treasurer — Dr. Edmon Rosenthal, Brussels.

Madrid was selected as the place for holding the Seventh International Dental Congress in 1919, and San Francisco as the place for the next Federation meeting at the time of the Panama-Pacific Congress in 1915.

For the first time in the history of the Federation an American has been complimented by an election to the Presidency of the organization. It may be of interest to briefly refer to the Federation, to explain the purpose of its existence and to point out the necessity for an organization of this character. The Federation is composed of delegates from National Associations, parties to the

agreement, five delegates from each of the larger countries and a proportionate representation from the smaller ones. It is the connecting link between congresses which are held under its direction and supervision. The Federation meets every year and considers various subjects relating to dentistry. It may very properly be called an international clearing house. The real purposes of the Federation have been much misunderstood and few have realized its tremendous importance in shaping, and intelligently promoting, many things for the advancement of dentistry, which require a larger breadth of vision than that limited by the horizon of any other country. The organization has done much to bring about a better understanding between National Societies. The results obtained along dental educational lines in advancing standards for the admission and teaching of students have been of inestimable value. It has also taken a leading part in matters of public health and oral hygiene. The Federation deserves high praise and commendation for much excellent work, and should receive the cordial support and endorsement of the profession throughout the world.

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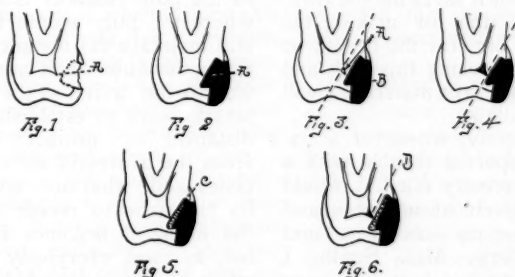
THERE was a boy in our town,  
And he was wondrous wise.  
He didn't keep his teeth clean,  
They pained him and he cried,

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Now he's got a tooth brush,  
And cleans them twice a day.  
So they're sound and white  
And he is very gay.

## SAVING PULPS

LYMAN L. ZARBAUGH, D.D.S., Toledo, Ohio



I am going to take the new editor at his word. In his "Let's Get Better Acquainted" editorial, he says, "Can't you send me an article on most any subject in dentistry, not necessarily mouth hygiene, just that it is alive and you have something to tell?"

A freehand drawing with a lead pencil on a scratch pad of the accompanying sketch has been the means of saving a great many pulps in my practice during the past eighteen years. It has saved me many a long-winded argument with a patient as to why a tooth will ache and be uncomfortable after having been filled. I have always been old-fashioned enough to believe it better to save pulps than to destroy them and then only half fill the canals. Since hearing Dr. Elmer Best's paper and looking at his slides, I am more than ever in favor of this practice.

In my endeavors to save

pulps, I have encroached pretty near to the chamber, and in spite of all the linings I could employ, many patients return with the report that I must have left a little hole in the filling where wind, cold water, ice cream cones, etc., etc., could get in. Of course, I knew better, but it was hard to convince them of this fact. I hit on the plan of making this drawing to explain *why* the tooth was sensitive, and *how* it would recover and return to a comfortable state, for I was certain from observation, that if they would just stand "pat" for a few days the tooth would return to normal.

However, since the advent of a certain brand of white copper cement, which the editor assures me I have no right to identify by name (I will only say, is *guaranteed not to discolor in the mouth and come in six permanent shades*), I have not been called upon to exercise my artis-



tic skill nor has it been necessary to explain as much as formerly. I now line all deep-seated cavities with this cement and it saves me the trouble and time of making the sketch, but, for the benefit of those not using this new and most excellent material, I will tell the tale.

Formerly, whenever a patient reported trouble with a tooth recently filled, I would seat myself at my desk and reach for my scratch pad and say, "Now, Mrs. Smith, I will show you just why your tooth behaves that way, and I assure you that there is no leak in the filling. You see here an outline drawing of a tooth showing the pulp chamber; well, the distance between the outer wall of the pulp chamber and the wall of the cavity at 'A,' Fig. 1, is considerably shorter than it was before decay set in, and when I drilled that decay out of the cavity and inserted a filling, I brought, as it were, the outer wall of the pulp still nearer to the wall of the cavity or filling. Metal being a great conductor of heat and cold, the pulp becomes painful whenever they are brought in contact with the filling." (At this point Mrs. Smith usually speaks up and says, "Yes, I know it; you needn't tell me that"). "We will now continue with the drawing, and you will notice that I make a black spot at 'A,' Fig. 2. This spot represents the filling; now, still working our pencil, I call your atten-

tion to Fig. 3, and you will notice the little dotted line; well, that line which passes through the southeast corner of the pulp chamber is about where the pulp should be to still maintain the distance between its outer wall and the wall of the cavity, so the pulp sets to work to establish that distance, to protect itself from the aforesaid ice cream cones and what-not, and in its endeavor to recede from the filling it becomes irritated, as most everybody does when they are crowded, and during this irritation you have these unpleasant sensations you have been telling me about. Have patience, for in a little while the pulp will establish a line of defense, a little fort, as it were, to lie back of, as shown in Fig. 4, by the black spot inside the dotted line. Now, Mrs. Smith, this little fort (we dentists call it 'osteodentine' or 'bony dentine') is not built up in a few days; it takes a few weeks sometimes, and you will have a little disturbance in the pulp chamber, but every time you feel it you know that another layer of dentine is being established *between* the pulp and filling; and I am sure if you just give the pulp a little time it will make itself quite comfortable and will not bother you any more. I never saw a pulp build one of these forts, but I suppose that it throws out a thick liquid, something like honey, and this substance gradually thickens and turns to bone.

"Yes, Mrs. Smith, there is a way now of lessening this irritation to the pulp in deep-seated cavities. It has just come into my hands. I was not using it when I filled this tooth for you, but from now on I employ a copper cement and lay it between the pulp chamber and filling, as I am showing you here at the point of my lead pencil in Fig. 5 at 'C.' Of course, the pulp continues to lay up the dentine, but the copper cement allays irritation to such an extent that in a short time we find it very comfortably settled behind the little fort, as shown in 'D,' Fig. 6, and without having caused the least bit of discomfort or trouble.

"That's all right, Mrs. Smith; you are perfectly wel-

come. I am glad that you feel better satisfied with the filling. Yes, I can give Mr. Smith an appointment a week from today. Very well, you may tell him to come at 9 A.M. Good afternoon, Mrs. Smith."

And Mrs. Smith goes out of the office feeling a whole lot better than when she came. She had to be shown; but, wasn't it better than to murder poor old Mr. Pulp, who was only trying to make himself comfortable? I think so, and besides Mrs. Smith made an appointment for Mr. Smith before she left the office, and she will send the whole Smith family to us if we take the pains and trouble to "show" her once in a while.

## UNSTERILIZED DISHES AND UTENSILS IN RESTAURANTS

Indiana is not the only State where the necessity for cleanliness and proper sterilization of kitchen utensils and dishes is appreciated. In other countries the public health movement has gone so far that the need of asepsis in connection with the food supply is beginning to be appreciated. The *London Times* in a recent issue has this to say of the danger of contagion through the use of glasses, utensils and towels which have been infected with the germs of typhoid fever, diphtheria, tuberculosis and syphilis.

"When one thinks that a typhoid carrier, a victim of ambulatory typhoid fever—that is, typhoid fever in an active stage—of influenza, mumps, of diphtheria, of tuberculosis, of syphilis, may have caused the contamination of glasses, spoons, forks, etc., within an hour of their being used by a healthy man, one realizes how momentous the question of sterilization in restaurants really is. A cracked lip, a small ulcer, even a trifling abrasion of the mucous membrane of the mouth may afford a lodging ground for the invading organisms,

which will quickly pass from there to the blood stream. Undoubtedly infectious diseases are spread, and epidemics invited by this curious oversight of the restaurant proprietors and their public. In the report of the Out-Patient Committee of the London Hospital on syphilis it is recorded that a case was recently under treatment of a glassblower's boy assistant. The boy was infected on the lip. The elder man was induced to come up to the hospital, and was found to be suffering from an active condition of the mouth, 'infection,' the report continues, 'through glasses, drinking utensils and towels is met with, but is not common. Dr. Sequeria recently had a case in which a beer can handed from one workman to another was the agent which carried the infection. . . . Dr. Fields reported to us a case of a patient infected in the eyelid as the result of the attempted removal of a foreign body from the eye by the corner of a handkerchief moistened with saliva.' From all the data available the committee arrived at the conclusion that about 12 per cent. of the population of London might be supposed to be infected with this disease.

"This is undoubtedly an ex-

ceedingly moderate statement of the case. But it is surely an exceedingly disquieting one, when one thinks of the tens of thousands of persons who drink daily from the same unsterilized glasses, and eat with the same spoons and forks.

"Happily, the remedy is simple. It consists in the installation in every restaurant, tea-room, and bar of an efficient sterilizer, and the regular use of this. It would not be difficult to combine washing and sterilizing in a single process, so that no great loss of time need be incurred. In any case, the advantages from the public health point of view would far outweigh any additional trouble caused, whilst the public would possess a graduate of immunity from danger. One cannot suppose that anything but ignorance is responsible for the present methods. It is impossible to think that they can remain in vogue. In view of the prevalence of orally transmitted diseases, the introduction of sterilizers is a matter of grave public urgency. It is absurd that any man should be required to expose himself to a needless and most insidious risk when a means of escape from it lies ready to hand."—*Indiana Health Bulletin.*

LITTLE BO PEEP has lost her sleep,  
Her face so swollen she cannot  
eat;  
When she gets well 'tis safe to  
say,  
She'll go to the dentist's every  
day.

GEORGIE, PORGIE, pudding and pie,  
Kissed the girls and made them  
cry.  
They cried and cried—they were  
very mad,  
'Cause his teeth weren't clean and  
his breath was bad.

## MY HOBBY

GEORGE CUNNINGHAM, D. M. D., L. D. S., R. C. S.,  
Cambridge, Eng.

**This story is a little jewel. Read it and pass it on to one of your school teacher patients and have her read it to her class. Ask her to give it to the teacher in the next grade.**

No doubt many of you, when you were younger, read the little slave story about "Massa Careless."\* In that book you were told in simple language how to take care of your teeth while you are young, so that when you grow up to be men and women you may have your full set of thirty-two teeth.

Now I am sure you would all like to learn something more about those wonderful servants of yours—your teeth. The more you learn about them the more wonderful and interesting you will find them to be.

Nearly every boy and girl has a hobby of some kind. Some of you, I daresay, collect foreign stamps. Others, perhaps, catch and mount butterflies or moths. Others may go in for botany and gather specimens of various wild plants, which you press and mount, and arrange in their various classes.

A hobby is a very good thing for you to take up in your spare time, and gives many hours of pleasure and interest. You try to learn as much as you can about your particular hobby, so that your

collection may be arranged in proper order, and be a credit to the owner, if not the envy of others who have no hobby. You, my young stamp-collecting friend, would not think of mixing French, German and Russian stamps on one page of your album. You learn to recognize at a glance the stamps of various countries and keep certain pages of your album for the stamps of certain countries. You classify and arrange them neatly, so that you are proud to show them to your friends.

Then you go in for collecting butterflies or moths. If you want to do it thoroughly (and the whole charm of a hobby is to be thorough) you will read all you can about it. Then you will know where to look for certain kinds and what to do with them when you have caught them. For some you will have to scour the breezy moorland or open heath. For others you will range the shady glades of forest or wood. Others you will only find in fens or marshes. Then again, you will learn that some can only be caught by daylight while others only come out at night. What a delight it is after a long hunt over the hills or through the woods, to open

\*Oral Hygiene, January, 1912.

your collecting boxes, and "set" your specimens. With what care you handle them lest you spoil some of their beauty. Then you arrange them in show cases, which perhaps you have made yourself—according to their classes or order, in neat regular lines. By the time you have collected and mounted two or three hundred specimens you have got a collection well worth looking at and you have done it all yourself.

But what about our botanical friend? I know quite well what you will do if you want to keep a collection of plants. First of all you will make a press. Two drawing boards, some sheets of blotting paper, and a weight to put on top, and there you have your press.

But the real fun begins when you go out botanizing. By that time, of course, you have learned a lot from books. You know all about petals and sepals, stamens and pistils, and their uses. You know the different shapes of leaves, and the different kinds of roots. You will also have learned something about the "order" into which plants are divided. Perhaps even you will have learned some of the hard Latin names, so that a common buttercup is something more than that to you. It is a "*ranunculus bulbosus*." What new beauties you discover in even the commonest of wild flowers, and how carefully you gather, not the flower only but the whole plant—flower, leaves, stem and root.

Then when you get home, out comes your press. Your specimens are carefully spread out one by one, between sheets of blotting paper, the flowers, leaves and roots arranged so that they can be seen quite plainly. The blotting paper sheets with the specimens between are then put between the boards, and the weight put on top. There you leave them for a week or so until they are pressed and dried, then you carefully mount each one on a sheet of white paper, either with gum or needle and cotton. You write on each paper the name and order of the plant, and when and where you collected it.

When you know a little about Botany every field and hedge row is full of interest for you, and a country walk brings delight that you would otherwise miss.

And so I might go on about many hobbies. The more you learn about your hobby, the more you want to know. You want your collection to get bigger and better, day by day and week by week. Your hobby leads you on and you are only too pleased to follow. Now whether you have a hobby already or not I want you to make a hobby of your teeth. That sounds a bit strange, perhaps, but I think I shall be able to prove to you that your teeth can be made a hobby as interesting as any of those I have mentioned.

One good thing about making a hobby of your teeth is you always carry your collec-

tion about with you. Every time you smile or speak you show your specimens to someone or other. How nice it is to hear people say, "What a beautiful set of teeth you have" or "However do you make your teeth look so nice?" You can reply to them, "Ah, my teeth are my hobby."

As with all other hobbies, the first thing to do is to learn all you can about them. You already know that your teeth are not all alike in shape. So we will make a start by learning the names of the different kinds of teeth. Right in the front of your mouth there are eight teeth—four in the upper jaw and four in the lower jaw. These each have a cutting edge like a chisel, and are called by a name that means cutting. They are your "incisors" and are used for biting or cutting off pieces of food and taking them into your mouth. Next to them one on each side at the top and one on each side at the bottom, are four pointed teeth which look something like the teeth in a dog's mouth. They are called "canine" teeth, which really means "dog" teeth. They are used for tearing meat into shreds before passing it on to be thoroughly masticated or chewed. Next to the canine teeth, two each side at the top and two each side at the bottom, are the premolars or bicuspid. The rest of your teeth have broad and fairly level tops. They are used for grinding up the food and mixing it well

with the saliva (as the liquid in your mouth is called). These are your molars or double teeth as we sometimes call them. The first of these molars come when a child is about six years of age and so they are known as the sixth year molars. There are four of them, and they grow next to the last back "baby" teeth. They are sixth from the middle of the front teeth. So it is quite easy to remember which they are. Sixth year molar—sixth from front. As these are the first of the permanent or "second" teeth they are very important and should be well looked after. If they are neglected and allowed to decay they spoil the whole collection, because they not only cease to be of use themselves but they pass the decay on to the other teeth. Perhaps you have heard the story of the king who lost his kingdom through neglecting what seemed to be a very simple thing. He was riding to join his army to lead them against some enemies who had invaded his country. He noticed that a nail was loose in one of his horse's shoes, but instead of having it put right, he rode on. Presently the nail came out and so loosened the shoe. It was not long before the shoe came off and the horse went dead lame. The king was unable to reach his army, which was attacked and beaten by the invaders. Had their king been there to lead his soldiers no doubt they would have won the battle, and he would not have lost

his kingdom because of a loose horseshoe nail. What appear to be small things of no consequence often have big results.

It is so with the teeth. The first sign of decay should be attended to or there is no telling how far it will spread.

Now let us look a little deeper into this subject of decay. You might ask me, "Suppose I do neglect my teeth and allow them to become coated with the remains of food, why should that actually eat away the hard stuff of which the outside of my teeth is composed?" It does seem very wonderful that it should be so, and I will try to explain to you how this decay takes place.

If the food deposited on the teeth kept the same as it was when taken into the mouth it could not make the teeth decay, any more than a slice of bread could eat its way into a china plate. But it does not keep the same. Before very long a great change takes place in it.

You know that if you leave milk in a vessel exposed to the air it will gradually turn sour, and the warmer the weather is the more quickly does this happen. This change is caused by tiny living creatures, so small that you would have to use a very strong microscope in order to see them at all. These creatures we call "microbes."

There are millions of them all around us in the air, in water, even in the ground. Some do useful work for us

while others do much harm. Some clever men make microbes their hobby, and find out all they can about them. They have found out for one thing that they are far more numerous in hot weather than they are in cold. That is why milk goes sour more quickly in summer than it does in winter. Now every time you breathe you take into your mouth many thousands of these microbes. It is always summer in the mouth, because as you know, it is always warm there. So the microbes quickly increase in number because of the warmth. They become far more numerous in the mouth than they are in the air outside. They at once attack any remains of food that may be clinging to your teeth. They serve it exactly the same as their brother microbes serve the milk, that is, they turn it sour or acid. It is this acid that eats its way into the hard covering of the teeth, and so cause decay. You will see at once that if no food is allowed to remain on the teeth for very long the microbes will not be able to do them much harm. Now perhaps you understand a little better why "CLEAN TEETH DO NOT DECAY." You have been told that it is most important to clean your teeth after the last meal of the day.

Let us see why. Suppose you have supper and then go to bed without cleaning your teeth. Some of the food is sure to settle on and in between them, especially in any



crevices. All night long you keep breathing, breathing, breathing. All night long millions of microbes are being born, being born, being born, and are working, working, working, and by the morning have done a lot of harm. You wake up with a nasty taste in your mouth and your breath has an unpleasant smell.

This is generally because of the "sourness" caused by the microbes. While you have been sleeping they have been busy, whereas if you had brushed your teeth well before going to bed the microbes would have had nothing to act upon and so would have been "unemployed" as far as you were concerned. Indeed many would never have been born at all. Most of the harm done to the teeth is done during the night, and most of that might be prevented by cleaning the teeth just before going to bed.

Now let us see what happens if these little microbes are allowed to do just as they like, and no attempt is made to stop them. A tooth, as perhaps you know, consists of three parts. The bulk of a tooth is composed of a hard, bone-like substance called "dentine." The part embedded in the jaws known as the root or roots is covered by a substance more like real bone, called cementum, while the part which protrudes from the jaws and is known as the crown of the tooth, is covered by the hardest substance in the whole body. This is called enamel. In the middle of the

dentine is the soft, fleshy part, known as the "pulp," but more commonly called the "nerve," because it is the part that hurts. The first part of a tooth to decay is, of course, the enamel, which you will remember is the hardest part. The enamel is seldom perfectly formed. There are generally weak parts in it which take the form of crevices, from which it is practically impossible to remove the remains of food by means of a tooth brush. In some people these crevices or crannies are much deeper than in others, and that is one reason why some people's teeth decay more quickly than other people's teeth. The crevices are very small, and generally can only be found by a dentist using a probe. Once found, however, the dentist can fill up the weak part and make the tooth perfectly sound. Once a hole appears in the enamel the dentine begins to decay and does so very quickly. When the decay nears the pulp it causes acute pain or toothache. After a time the pulp dies, but the disease goes on until it reaches the end of the tooth, where it probably forms an abscess. This is a very painful thing and often very hard to cure.

All this might have been prevented in the first instance by proper care and cleanliness. "Prevention is better than cure," but it could have been cured in the first stages of decay. As soon as a tiny hole appears in the enamel, a visit should be paid to a prop-

er dentist. He will clean and fill the hole and so make the tooth sound and strong again. This is called "stopping" a tooth, and is quite painless if done in the first stages of decay. The longer a person delays having a tooth stopped, the bigger the hole gets, and the more likely it is to be a painful operation. If neglected until the dentine is badly decayed and the pulp affected, it becomes impossible to "stop" it, and the only thing to be done is to have it extracted, unless you have lots of endurance, heaps of time and your parents have plenty of money. Our Botanical and Entomological friends are very fond of using long Latin names for common plants or butterflies. Now we who make a hobby of our teeth can do the same. We have all heard the expression, "By the skin of his teeth," and we know that it means "By a very narrow margin," but it will surprise many people to learn that there is really a "skin" on our teeth. This is sometimes called "Nasmyth's membrane," but its Latin name is "cuticula dentis." These are both very high sounding names, but the "skin" is a very thin one, so thin in fact that a thousand of them placed one on top of the other would only be as thick as the skin on the palm of your hand.

But our invisible little enemies, the microbes, are not the only ones that attack our teeth. There is another very active enemy that I must tell

you something about. This enemy is called "tartar" and is deposited on the teeth from the "saliva." At first it is quite soft, and easily removed by the toothbrush, in the ordinary course of cleaning the teeth. But if allowed to remain the tartar, which is mostly lime, becomes of a stone-like hardness. It is like the fur which forms inside a tea kettle. If tartar is not removed it causes inflammation of the gums, which waste away, thus loosening the teeth so much that they may even drop out. With some people it forms much more quickly than with others, and if the nightly cleaning does not keep the teeth free from tartar, it should be frequently removed by the dentist.

We have had a good deal to say about the enemies of the teeth; let us now find out something about their friends. Of course the tooth-brush is a friend that no teeth should be without. Clean water, to rinse the mouth out after every meal, is another good friend. But the kind of food you eat also has great effect on the teeth. Generally speaking, hard food is better for the teeth than soft food.

Soft food is sure to leave some clinging to the teeth for the microbes to act upon, whereas hard food helps to clean the teeth. Hard crusts of bread, crisp toast, and hard plain biscuits are all good for the teeth. Besides cleaning the teeth, hard food gives the muscles of the jaw that exer-

cise which they need just as much as the other muscles of the body. If these muscles are not exercised the lower part of the face never develops properly, and the whole appearance of the person may be spoiled.

I think I have said enough now to prove to you what a splendid hobby you can make of your teeth. You are old enough now to understand the importance of having a good set of teeth, and still young enough to make it worth your while to start taking care of them, even if you have neglected them before.

When you clean your teeth now, you will know exactly what you are doing and why you do it. It is not merely to make them look nice, but also to keep them sound and strong. You will understand the importance of having your teeth examined by a dentist, because it needs his skill to discover the evil at the very commencement. You will not wait till toothache warns you that there is something very wrong indeed. You will now understand that it should never be necessary to have a tooth drawn at all when you have got all your second teeth. It is sometimes necessary to remove a baby tooth if it stays too long, because it may cause the second tooth which forms under it to grow in the wrong place. By the time you are twelve years of age all your baby teeth should be out. Sometimes, however, they stay in much

longer than that. I have heard of cases of young men up at the universities who still had some of their baby teeth. Of course these should have been removed years before.

Now I will give you a few rules which will help you with your hobby.

(1) Clean your teeth at least once a day.

(2) Always clean them after the last meal at night.

(3) Use a small toothbrush with stiff bristles.

(4) Brush up, down, and across, outside, inside and between the teeth.

(5) Use a little soap and precipitated chalk on the brush if the teeth are stained.

(6) Rinse your mouth out after every meal.

(7) Do not ill-treat your teeth by cracking nuts or biting threads or substances likely to injure them.

(8) Chew plenty of hard food.

(9) Keep a sharp lookout for black specks in your teeth. Immediately you discover one go and show it to your dentist. Don't wait until it is a big one.

If you follow these rules, there is no reason why any boy or girl of you should not have and keep a perfect collection of teeth.

"CLEAN TEETH DO NOT DECAY."

"HARD FOOD KEEPS TEETH  
SOUND."

"SOUND TEETH NEVER ACHE."

OH, that men should put an enemy in their mouths to steal away their brains.—Shakespeare.

## MAXIMS FOR PROLONGING ACTIVE AND USEFUL LIFE

1. The commercial value of a life lies solely in its productive period; the other periods are a burden upon this.

2. This period should be prepared for from infancy, protected in adult life, and extend as long as possible into old age.

3. Constitutional vigor is created mainly by proper food and proper hygiene in youth.

4. No person over forty years of age should subsist mainly on animal foods, which are very good in early life. The reason for this is contained in maxim 14. The elasticity of some of the most important tissues in the body cannot be preserved by a person over forty years of age who continuously loads up the body with the waste products of nitrogenous foods in excess, even if he had the best food in youth. Fruits and cereal foods should be largely and generally used by all persons over forty years ago.

5. Nerves are exceedingly important. They grow best in the country. Let youth be passed as much as possible away from the crowded centers of population.

6. Education may be misdirected, and may be overdone. A good machine may be ruined by making it too elaborate. A good knife may

be rendered useless by sharpening it all away.

7. Regular, moderate, physical exercise is essential, and is generally neglected.

8. Do not make a burden of amusements. They may, and often are, made worse than overwork or undue worry.

9. Do not set an impossible ideal of life. It results in disappointment, and that ages.

10. Cultivate a serene mental attitude, and develop a capacity for deliberate enjoyment of whatever is at hand. The greatest pleasure often comes from little things easily and often overlooked.

11. Avoid every excess. Do not overwork, overplay, overeat, overdrink, oversmoke, or allow yourself to become over-inactive.

12. Do not assume obligations that you cannot discharge. This is the secret not only of much physical, but of much moral and mental disaster.

13. Study your diet, and your hours of labor, sleep, and relaxation, and conform to your constitutional requirements.

14. Take particular precaution to preserve by daily actions the elasticity of all the tissues.

15. Maintain self-respect, avoid sordidness and gloom, and "grow old gracefully."

# DENTISTRY AND LIFE INSURANCE

S. SYDNEY URROWS, D.D.S., Boston, Mass.

We have medical inspection when applying for life insurance; why not dental inspection by competent dentists? Dr. Fisher, Medical Director of Postal Life Insurance Company says that at the present rate from preventable diseases over six million American lives will be needlessly lost in the next ten years.

In dealing with the great problem of preventable diseases and the sacrifice and loss of life, resulting therefrom, no other organ of the body plays so important a part as the mouth. The mouth is the most extensive breeding place for all pathogenic micro-organisms. At least 95 per cent. of all tubercular infection takes place through diseased or ill-kept mouths.

The individual applying for insurance will no doubt pass a physical examination and still his mouth be in a deplorable condition wherein grow and develop these organisms which produce all other diseases. All forms of stomach trouble can be found in infection from the mouth, which in turn lessens the vitality and renders the individual susceptible to disease. I believe that a bad condition of the mouth and teeth seriously affects the general physical development.

Municipalities are establishing dental clinics for the

treatment of teeth of poor children; Boards of Education are allowing clinics to be conducted in public schools; Industrial Concerns and Insurance Companies are recognizing the importance of having their employees and policy holders attended to by dentists. Hospitals are adding dentists to their staff.

If it were generally known what tremendous influence the teeth have upon general health, I am sure people would not invite disease by neglecting the important duty of caring for the teeth any more than they would by exposing themselves to known infectious diseases, yet to neglect the mouth and teeth is to invite disease, for the mouth is the gateway of disease. It is a veritable culture medium for microbes, as it possesses all conditions favorable for their growth. I believe that the insurance companies should make an educational campaign in Oral Hygiene to its policy holders, such as sending literature, pamphlets, etc., dealing with the care of the mouth and by requiring compulsory dental inspection of all applicants for life insurance.

HUMPTY, DUMPTY sat in a booth,  
Humpty Dumpty had a bad tooth,  
Only a brushing—and not the  
king's men  
Will make his bad tooth a good  
one again.

# EDITORIAL



WM. W. BELGHER, D.D.S., EDITOR  
186 Alexander Street, ROCHESTER, N. Y.



**ORAL HYGIENE** does not publish Society Announcements, Obituaries, Personals, nor Book Reviews. This policy is made necessary by the limited size and wide circulation of the magazine : : : : : :

## THE INDUSTRIAL DENTAL DISPENSARY

All are not agreed as to the advisability of free dental work in our public schools other than the examination and reporting back to the parents for attention, the relief of pain and prophylactic treatment and instruction. But there can be real division of opinion of the value and crying need of this service in our industrial institutions where the employees are largely made up of small salaried persons and unable to pay for dentistry of any kind. There are a number of such dispensaries and they should be multiplied by the hundredfold in the next five years. The industrial plants supplying this need have been established largely independent of any effort of the profession and dentists know little of these activities. I expect at least two articles on this subject in the near future and hope to secure illustrations showing the equipment.

Employers are not informed as to the necessity of this work, and while they are supplying libraries, restaurants, medical attention, manicures and rest rooms, the dental dispensary is conspicuous by its absence.

I am informed that England has a number, but a most complete plant of this kind in America is located at the Armstrong Cork Company's factory, Pittsburgh, Pa. There are 1,200 employees, of whom 800 are girls. This dispensary has been in operation several years, and a reading notice of the same was presented in Volume III, page 314. It is housed in a portion of their new building. The Heinz Preserving Company, Pittsburgh, Pa., is also so equipped, and when a new building is erected it will be furnished with a model dental dispensary for the benefit of its workers. Several department stores have begun the work, among them the Wanamaker store, New York. The dentist is in attendance for two hours each day to relieve pain and give advice. Treatment other than this is rendered at the office of the dentist and paid for

by the employee. Lord and Taylor, New York, also employ a dentist who is in full attendance. Service rendered is paid for by employees. Several other department stores are also placing dental equipment. The Larkin Soap Factory, Buffalo, N. Y., has a dentist in constant attendance. A charge of approximately \$2.00 an hour is made for the service. Tooth-ache is taken care of at any time, and I do not think there is any charge for this. About the only advantage to the employees is the fact that they do not lose their time as would be the case in seeking service outside the factory. The company employs the dentist at a flat salary and furnishes materials. There is no compulsion and the employees are free to go where they please for dental work. The company does not expect to make anything on the venture, and undoubtedly will reduce the rate for service if it shows a surplus.

Recently there was held an industrial fair at Exposition Park, Rochester, N. Y., the meeting-place of the National Dental Association, and a health exhibit was installed, part of which was a display by the Rochester Dental Society. On one of the panels was the following:

INDUSTRIAL EMPLOYERS PLEASE TAKE NOTICE.

An employee with tooth-ache is not 100 per cent. efficient and is not giving you his best efforts.

You have rest rooms and dining rooms for the comfort of your employees. Why not equip for their efficiency?

The idea is not new. The Armstrong Cork Company and the Heinz Preserving Company, Pittsburgh, Pa., have such institutions and find that it insures increase in health, interest and attention to duties upon the part of employees.

WE WANT DENTAL DISPENSARIES IN OUR FACTORIES  
AND DEPARTMENT STORES.

Rochester is the home of the Free Dental Dispensary movement in America: why let Pittsburgh set the pace?

As a result of this notice and subsequent efforts of the society, at least one industrial institution is seriously contemplating installing a dental dispensary in their plant, and undoubtedly there are several others who will do so when their attention is called to the matter and they are shown its practical benefits.

The dentist, with his confidential relations to employers of labor, has an excellent opportunity when rendering services to such patients to forcefully present the value of a dental dispensary.

Keep this in mind and work for these industrial dental dispensaries. A girl who receives a wage of \$8 a week has



no money for the dentist. If she has anything left over after paying for the essentials, it goes to the purchase of a new hat and her teeth receive little or no attention. I guess you and I would do the same if similarly placed. She receives no dental attention unless the employer furnishes it and with such service and instruction as to future care of her mouth, may make some dentist a valuable patient. So there is a selfish reason for this activity. I guess this is true in most of our actions. Meanwhile, get busy and if you know of other industrial dental dispensaries, advise me that I may place the information before our readers.

## ORAL HYGIENE LECTURES AND POLITICS

New York State was the first to recognize the dental profession in the Health Department. Under the administration of the former Health Commissioner, the lectures were an important part of the health work of the state. Two lecturers were appointed who served part time, and as the demand increased two other members of the profession were added. After a time the lectures were placed under the civil service rules and permanent appointments made. Dr. W. A. White was one of these, and as he had been most zealous in his efforts to establish this work his appointment was generally commended. With a change in the administration the lectures have been abandoned for lack of funds, so it is said. Meanwhile, another dentist, wholly unknown to the profession, even in his own district, was appointed to assist in the work. He stands very close to the throne and has friends in a powerful political club. Result: although doing little or no work and receiving a salary of some \$2,000 a year, he is continued on the pay roll even with no funds in sight.

The dentists have made up their minds that unless they get into the political field their chances for recognition are slight and in the November elections their influence will be a factor. An appeal has been sent out to support the friends of oral hygiene and resume the lectures on this subject. Here's hoping they will be successful. This political game isn't nice but I guess we have got to get in it if we continue to have peace, comfort and happiness. You no more than get a good thing when some political bonehead wants a generous helping of the white meat. In this case he appears to have stolen the whole bird.

## **A MEMORIAL MEETING IN HONOR OF THE MEMORY OF DOCTOR GEORGE EDWIN HUNT**

The dental profession of Indiana will hold a memorial service in honor of the memory of Doctor George Edwin Hunt, in the auditorium of the Masonic Temple, North and Illinois streets, Indianapolis, Ind., November 21, 1914, at 8 P.M.

Every graduate of the Indiana Dental College, of which Dr. Hunt was the dean up to the time of his death, and every member of the profession has been invited to be present, and a special invitation extended to the Marion County Medical Society.

Dr. J. N. Hurty, chairman of the Indiana State Board of Health, an intimate friend of Dr. Hunt, will make the principal address.

A meeting of this character is unique in the annals of dentistry and few men have measured up to such an honor. Dr. Hunt not only took an active interest in his chosen profession, but also did a great deal for civic advancement in the city of Indianapolis, and citizens of all walks of life will join the medical and dental profession in this tribute to his worth as a citizen and a man.

## **DEDICATION OF THE FORSYTH DENTAL INFIRMARY FOR CHILDREN**

The formal dedication of this institution is announced for Tuesday, November 24, 1914. The citizens of Boston should be truly thankful in the acquisition of such a magnificent charity.

Many new and interesting features relative to dental equipment will be shown and an opportunity presented to view the inner workings of this most ambitious undertaking in mouth hygiene.

A fortune teller told me I was soon to take a long journey and I guess this is it. I always did believe in fortune tellers. Haven't I lived right alongside of a gas meter and accepted its monthly readings without protest?

I hope to be present and if this happens you will hear all about it in the next issue.

## THE OLD ORDER CHANGETH

The dentist who enters practice today is certainly having an easy time and compared to the practitioner of twenty-five years ago, his is a bed of roses. But he is losing a lot of efficiency. It has been well said, "there is no royal road to learning."

Nowadays the dentist sends his extracting, artificial dentures, crown and bridge work, orthodontia cases and everything else of a mechanical nature or tending to soil his hands, to the laboratory expert.

We are all becoming "specialists," and I guess it pays in dollars, but everything else is loss. In the beginnings of dentistry the practitioner made most everything he used. Very few dentists know how to temper steel and make a special instrument when most needed. Personally, I would feel lost if unable to do this, and all these neglected things help to give your hands a college education.

A successful dentist recently bragged that he didn't know how to make an artificial denture and didn't want to know. In college he hired someone to make his graduation set and this was his first and last offense. Of course he doesn't realize it but both he and his patients are losing a lot by being entirely dependent on the work of a laboratory product. But there are others and a fair percentage of the dental profession are taking orders for dental work and the laboratory dentist does the rest. This kind of service is a reproach and it is no wonder the advertising parlor flourishes. A large part of the profession are so busy throwing a fit over the newly arrived fads they haven't time to devote to the practical things.

Surely, commercialism has its inning and the magazines are full of courses in salesmanship to teach the neophyte how to make one dollar's worth of services pay for five dollars in automobiles and Turkish rugs.

## OUR CHILDREN ALSO

This same thing is happening to the city boy who has no responsibilities and all he has to do is swagger around in tailor made clothes, drive his father's automobile, smoke cigarettes and join high school "frats." Our children have such a protected atmosphere they are forced into some kind of deviltry just to keep their minds busy.

When you and I were boys we stopped on the way home from school and had a visit with the blacksmith, shoemaker, tinsmith, broom maker or a dozen other industries that had an open door just off the street and welcomed an inquisitive boy who wanted to know how and why. Home duties helped and the boy in the country didn't need a course in manual training;

he early learned how to mend a harness or make a needed farm implement work its way, not to speak of milking, plowing and reducing a cord of wood to two foot lengths with the aid of a saw, saw buck and a dull axe to prepare the "kindlings."

Most city children have too much money to spend and all except a chosen few have to learn by sad experience the real value of a dollar.

Illustrating the ignorance of the average city boy to his surroundings, I will cite the case of a young hopeful whose parents thought they were doing their duty when making the youth earn the money he needed for spending. There were always ways open for earning money by washing windows, attending to the furnace or cleaning walks. There was no compulsion in the matter but if the boy had money he must earn it, and there was always a job waiting for him.

There came a day when the local ball team was to play and he asked to stay out of school and attend the opening game.

This the father consented to but wondered where the money was coming from. The boy had been rather scornful on the work question and the Saturday before he had taken a friend up the river in a hired canoe and had been declared a bankrupt. There was an understanding that no funds were to be advanced at any time; paying for services before they were rendered hadn't worked out well in that family. The mother was in strict accord with this arrangement and had been notified of the situation and promised to have a bad attack of the marble heart when asked for funds.

So the boy woke up to the stringency in the money market with a perfectly good day at his disposal, a cracking ball game in town, a day with no school and dead broke. Of course, he commenced to get sorry for himself.

Early in the autumn the father had found it necessary to replace part of the bath room paraphernalia with new fixtures and as a result a lot of lead pipe and old copper was temporarily stored in the "wood shed" all ready for the boy to sell when he made application but all the winter he had stumbled over it and nothing doing.

The father noting the too evident depression of his son said, "My boy, I am actually ashamed to mention it, but conspicuously displayed in the back room is a lot of old junk. Take this down to the man who purchases such things and you will have enough money and to spare to attend the ball game." There was so much he couldn't take it all, but he lugged enough to net him \$1.50 and expressed surprise and much gratification over the fact.

The kid did not know that such things represented money and his father wondered at the fact.

I asked him, "Did your boy ever see a tin peddler's

wagon? The kind that came around when you were a boy and traded in bright new tin ware for old rags or metal?" After considering the matter a moment he replied in the negative. The whole trouble with that boy was that he had been brought up in a different atmosphere and surroundings. Come to think of it, I haven't seen a tin peddler's cart in 25 years. Do they still exist in some sheltered quarter of our land? Tell me true.

## WHEN YOU WAS A BOY

Then things were different. They didn't have bath tubs. Only a big wash tub placed in the middle of the kitchen and partly filled with water, enough of which was warmed to just take the chill off. Do you remember how careful you had to be not to hurt your "stone bruise"?

Also you had to hurry as other members of the family were waiting their turn for the "Saturday night" bath. Those were happy days and you wouldn't have known a germ, not even the most common one, if you had been introduced to it.

You surely knew all about the tin peddler and could probably call him by his first name, and your mother was lucky to keep her store of rags and metals intact. Such things had a habit of disappearing and being traded in for real money that purchased "mibbs" and cream puffs and other delicacies of childhood.

In the town where I was brought up there was located a big paper mill. They hadn't learned how to use wood pulp in those days and bought quantities of old rags. That's where the tin peddler came in. Among the things purchased was a plentiful supply of suspenders that had passed their usefulness, carefully placed by the thrifty housewife when selling her rags and discovered by the sorters in the mill who burned such waste to get rid of it. Each pair of suspenders had a set of nice brass buckles and it was one grand discovery when I learned of this. None of the other boys were wise to the fact and I commenced to dig down to the prehistoric burnings and brought in seven or eight pounds of brass that was traded in for cash to the dealer in junk. Several expeditions paid me well but soon the other boys discovered the workings and after that if you secured any brass you had to go when things were hot and poke the stuff out with a stick. This was a case when competition became somewhat heated, as it were. All of which helped to sharpen your wits and prepare you for citizenship.

## AGAIN THE DRUG STORE AD

In the October issue I had an editorial calling your attention to this subject, but unfortunately the advertisement itself disappeared when I pasted up the "dummy" for the printer. I stood my desk up on its head in a vain search but with no results. Then I tried to blame the printer and he came back with a clean sheet. Any way, I never claimed to be of immaculate conception and a little mistake, every now and then, helps me to keep my balance. If it wasn't for this I might swell up like a toy balloon and acquire the habit of talking to myself.

### HOGE-DAVIS CO.

"The Place You Get The Most Change Back."

#### "A Clean Tooth Never Decays"

And it is important to remember also that teeth NOT clean MUST DECAY.

Careful brushing of the teeth at least twice a day, with the right kind of a tooth powder, paste, soap or liquid such as you may purchase at Hoge-Davis Co. should be impressed so strongly upon the child as a daily habit as to prevent the giving up of that habit at any future time.

Substance left between the teeth, upon the surface of the teeth and of the roots, develops acid, promotes decay, especially at night during sleep when the glands of the mouth are inactive. See that your children's teeth are kept cleaned.

#### 15,000,000 CHILDREN AILING.

Dr. Wood, of Columbia, Estimates that 15,000,000 Have Defective Teeth.

Fifteen million American school children need a doctor's attention. This is the estimate furnished the United States Bureau of Education by Dr. Thomas D. Wood, Professor of Physical Education in the Teachers' College of Columbia University.

#### And Don't Neglect Your Own Teeth

If you have been in the habit of neglecting them, thinking it is too late, get out of the habit.

Go and see a good dentist. Have your teeth thoroughly cleaned and put in order. THEN KEEP THEM IN ORDER. All the helps may be found at Hoge-Davis & Co.

#### TEETH BRUSH SATISFACTION AND WHAT IT MEANS.

A teeth brush wherein the bristles retain their shape—where the bristles won't come out—and to have those bristles of proper texture—these are the "teeth brush points" of satisfaction.

In the brushes we offer, these essentials are combined at such small cost that to deny yourself such "teeth brush satisfaction" is to harm the "clean teeth habit."

They are the kind that gets into all the corners and runs every germ to its lair; priced at 15 cts. and up. See our new hygienic brand brush—wrapped in sanitary sealed parchment envelope—fits every mouth, well made, wax back, bristles can't come out. Extra quality, only 25c.

"A clean tooth never decays."

Write that out and hang it up in the bath room. Make your children read it, and read it yourself.

### HOGE-DAVIS DRUG CO.

TWO STORES:

37 12th Street and Corner Main and Bridge Streets

## A SPECIAL ANAESTHESIA SUPPLEMENT

The *American Journal of Surgery* is about to issue a special anaesthesia supplement of thirty-two pages, to be issued quarterly, a complete journal within a journal, containing editorials, contributed articles and communications, abstracts, transactions of societies and book reviews. It will be the official organ of the American Association of Anaesthetists and the Scottish Society of Anaesthetists. The editor will be a medical man, but he is to be assisted with a staff which includes Drs. W. H. De Ford and Charles K. Teter to represent the dental end.

We hope the venture will be a success. The specialist in anaesthesia is very much present and deserving of a magazine all his own. A few years past a Dr. Hays, of Pittsburgh, published a modest publication devoted to this subject, but it received meager support. It would seem that a quarterly supplement with the list of talent should make a publication of this character both interesting and well worth while.

### C. A. N.

In a recent issue was concealed a small printed return postal card soliciting your subscription to the representative dental magazine. We hope you acted on this suggestion; if you did not, attend to the matter at once. Join the Action Club.

The price of subscription, a dollar a year, is absurd for the value received and it is up to the dental profession to support its literature. Even we can't live unless receiving your support and you make it worth while to the publisher and the advertiser. Up to date, we haven't anything to complain of, thank you.

Every dentist should take at least half a dozen dental magazines and read them. ORAL HYGIENE is full of good things but we can't print all that happens. We would like to but our limited space is against us. Come across now.

(C. A. N.)

THERE was a little girl and she  
had a little curl,  
Right in the middle of her  
forehead.  
But her teeth were never clean—  
and that is what they mean  
When they say that this little  
girl is horrid.

LITTLE MAY ROGERS, with her  
face so clean,  
What's the matter with her  
mouth, I ween?  
Teeth black and covered with  
green stain,  
She can't get her lesson because  
of the pain.



## WHEN THE DOLLAR AND DENTISTRY MEET

### A Dental Doctrine for December

JOHN PHILIP ERWIN, D.D.S., Perkasie, Pa.

Yesterday, all men were known by their presents. Today, they are judged by their presence. Then, a princely gift was the open sesame to society and the gift-bearing-Greek a menace to all. Now, the Paris gown and fashioned coiffure secure a front social seat and the manicured individual executes the three shell games for us.

This does not mean the practice of giving gifts has gone out of style. The Christmas season is not doomed for the scrap heap. It might well be said that never were more presents given and exchanged than are now. Everyone, to a greater or less degree, enjoys the blessings of the Christmas stocking and regrets the after-holiday-batch of bills.

Nor does it imply that gift giving has lost all of its power to win admiration and favor. The box of confections for the maiden, the bunch of stock for the politician, the ad contract for the editor and the golden ducats for us all, still hold their power to persuade and convince. From gifts to graft is about the same distance now as then.

It does indicate, however, that the well-groomed individual is the big factor in the world of success today. Rail-

road officials rule that conductors and trainmen wear well pressed custom made clothes and appear neat while on duty. Postoffice regulations likewise demand that the postman observe similar rules of tidiness. The enterprising merchant, seeking elusive trade, dons his best bib and tucker before entering the busy marts of commerce. It is a fact that men shine more, shave more, bathe more and dress more now, than their less careful brothers before them ever considered doing.

This recognition and realization of the value of presence have raised dental standards. The banker, the merchant, the public speaker, the man-of-affairs, all, wherever you meet them, display, as their personal testimonial to modern dentistry, pretty, well kept teeth. Every time your open lips present pretty teeth you, too, support the dental standards by silently proclaiming to the world your belief in the saving grace of dentistry.

The present season is a present one, presence notwithstanding. Gifts must be bought. Pride, that peace destroying imp, demands it. with an ever-increasing list of loved ones to be remem-

bered and the December Dollar sadly dwarfed, we go forth to shop and to suffer. What a transformation would be ours were we to combine in our giving the essential elements of presents and presence. The practice of uniting the first aid to appearances and the token of love into our giving would prove a welcome innovation.

Such an ideal condition arises when the dollar and dentistry meet in a Christmas present.

Largely because it becomes a universal gift, everybody has teeth, some time at least. All must eat to exist. Mastication, the common pleasure of all classes, depends upon the dental equipment. Although confusion of tongues at the tower created varied speech, still the language of the teeth remains alike to all. Therefore, wherever men smile, pretty teeth and their conversation will be deemed a pleasing remembrance.

Could there be a more useful gift? Many presents amuse for the day, then are stored away only to be resurrected as weather or fancy suggests. Others bring with them an after expense which frequently proves a burden. Still others carry with them the distracting element of uncertainty. A dental gift will serve 365 days of the year, will not entail any subsequent expense and will unquestionably please.

A dollar in the tooth is worth two in an uncertain

Christmas gift — chance is completely eliminated. We are all familiar with the question mark on the box of Christmas cigars. Christmas candy, with its price and quality far apart, is a positive uncertainty. The highest prices generally prevail during holiday season—bargain sales then are unheard of. Your Christmas dental dollar will yield 100 cents worth of positive value to the recipient.

Dentistry affords a sensible gift. A young girl was recently brought to the author for dental services. Heavy bracelets that jingled like sleigh bells, ear-rings, necklace, rings in galore, beauty pins, immense buckle and lastly a large watch told their tale of parental pride. Imagine my surprise upon being informed that the mother never had examined Mamie's teeth. Hard earned dollars expended to adorn the daughter with trashy jewelry, but not enough concern for the child's teeth to even look at them. You exercise no better judgment when you buy an expensive doll, which, after a few days play, looks like a war victim, and refuse to spend a few cents to have the child's teeth cleaned. Parental ignorance, not lack of love, is the cause of most dental neglect.

Above all else, the dental gift fits every member of the family. The child, with aching teeth, which greatly retard its development, fares well if a few dollars be expended for

needed dental services whereby it will be enabled to enjoy the Christmas turkey and plum-pudding to the limit.

A few years ago a certain mother had her boy's front teeth filled with gold as a birthday gift. Foolish, you say? The boy didn't think so. He was delighted. And every sensible person must picture this mother as an ideal, for such she is. Those gold fillings will always stand as monuments to a noble, sensible woman.

A gold watch for your boy, do I hear you say? Yes, it is a good thing to teach a boy to be prompt in keeping engagements. It is far more important, though, that he learn teeth can be bought only today, watches any time. Have your son wait another year for the time piece and use the money to have those bad teeth treated and filled. He will have a better time, all the time with good teeth and no watch, than with the finest watch and no teeth.

Is it a diamond for your daughter? True diamonds certainly do make attractive gifts, but, somehow, pearls are equally as charming, especially when set within pretty lips. Thieves break in and steal diamonds, never dental pearls. The most carefully set stone may loosen and be lost, but hardly a dental pearl. In some society the wearing of precious stones would dis-

play bad taste. A smile of pretty pearls is acceptable and pleasing to the high and low, always and everywhere.

When the dollar and dentistry meet in a Christmas gift to mother and father, then comes supreme satisfaction. Many parents, not blessed with saving dentistry in their youth, suffer the loss of many of their teeth. Today the expense of raising and educating a modern family frequently restrains them from the dental office. "The children first," is a motto in most homes. What a grand idea if children, in return for this love and sacrifice, combined their separate small gifts into a useful piece of dental bridge for father, or a needed crown for mother. Possibly one of them wears an ill-fitting set of false teeth which they have expressed a desire to replace. Surely, such gifts could not fail to please.

In consideration of all these facts let us determine to sink our desires for show and pomp by uniting the dollar and dentistry into a token of remembrance for those we love.

### FINALE.

Come, Yocco, ring down the curtain, turn out the lights, and let's go home. We have done about the best we can. Only pray the critics to give us a pleasant breakfast.

He is the best dressed man whose clothing none observe.—Trollope.

TWIN fools, one who doubts nothing, the other who doubts everything.

## THE CHILD AND THE SCHOOL

J. N. HURTY, M.D., Indianapolis, Ind., U. S. A.

The author has a way of making his writings most interesting and conveying home a well balanced argument. This article is no exception.

During the last school year in Indiana, 1,082 school children died. How many will die during the coming school year? The answer is not hard to find. The number will be not less than 1,082 and possibly a few more. Anyhow, each school day will see an average of six dead school children in Indiana. In addition to this slaughter during the coming school year, thousands of school children will have headaches, tooth-ache, earache, eye-ache, stomach-ache and the Lord only knows how many more aches. And the Lord knows, and we know too, that, all of these aches which the helpless ones will endure, will be due to the ignorance and neglect of parents and the state.

Over 300,000 children will have "colds." Hundreds will have diphtheria, hundreds will have scarlet fever, some thousands will have whooping-cough and measles. Chicken-pox will take a whack at them. Some will develop astigmatism and eye strain. Thousands will have lice and itch. And the pains, aches and inefficiency, which will attend the dyspepsia engendered by bad food and bad teeth will be enough to wring the hearts of war-making emperors and kings. And

just think of it, over 100,000 school children will not have a decent place to go to obey the calls of nature, but must use horrid privies, some of them so awfully horrid as to defy description. Some of these school children, many in fact, will be compelled to drink water from dug wells in which pollution reeks. Water from wells in which dead field mice, dead toads, dead rabbits, worms and bugs may be found.

### NOT OVERDRAWN

This picture is not overdrawn. There is no exaggeration. Every teacher and every health officer knows the above does not set forth the complete story. All has not been told; for nothing has yet been said of the physical and mental suffering which will be experienced on account of adenoids, diseased tonsils, defective sight, defective hearing, syphilis, diseased hearts, deformed spines, diseased glands and certain skin diseases. Let no one dare to say all of these diseases and conditions do not exist in our schools. Let no one dare to sneer at these truths. Each and all of the diseases and conditions here catalogued can be found in more or less degree in every one of the 92 counties of the state. And

more and worse, one can find in every county, business men, farmers and others, who have opposed and will continue to oppose, the protection of the innocents from these evils on the score of economy. If it is economy to let this awful waste of child life, child efficiency and child happiness continue, then let us away with economy. Talking about economy, it is true that a heavy percentage of our school monies is wasted, foolishly thrown away, through continuing and actually creating conditions of ill health and disease in our schools.

Every illy ventilated schoolhouse, every insufficiently or wrongly lighted schoolhouse, every unevenly and insufficiently warmed schoolhouse, every unclean schoolhouse, every schoolhouse that is not provided with a proper number of adjustable seats and desks, every schoolhouse not furnished with an abundant supply of pure drinking water, and every schoolhouse not supplied with indoor closets or sanitary outside privies, separate for the sexes, is an abomination. More, all such schoolhouses are monuments to the ignorance and extravagance, yes wickedness, of the people of Indiana.

#### A PLEA.

Every insanitary schoolhouse is a blot upon the intelligence and civilization of Indiana. Let us away with all such blots. It is not economy, it is not good busi-

ness to permit the slightest obstruction to exist in the upward pathway of our school children. Think of it! We actually force disease with its inefficiency into school children when we have insanitary school houses. "O pshaw!," says some mental defective—"hundreds and thousands of our children come through the so-called insanitary schoolhouses to high and good citizenship." True, and hundreds and thousands of soldiers come out of fierce battles unscathed, but that fact does not prove that battles are without dangers.

There may be, probably are, a few feeble-minded ginks who will say: "I went to one of them so-called insanitary schoolhouses, I was never medically inspected when I was a child and I'm here yet. What was good enough for me is good enough for my children." This kind of argument proceeds out of ignorance and conceit. It needs no reply.

Now, in the name of common sense, in the name of good business, in the name of humanity and Christianity, let us "bring up the child in the way in which he should go."

"Youth is the time to serve the Lord." Let us environ our children so they may serve the Lord. Here is the Indiana Child's Creed offered by the State Board of Health. Read it carefully. You will certainly approve it. It directs the, only way through

which normal God-fearing men and women may be secured to the state.

Let Indiana actually follow and enforce this creed, and she will, in a few generations, be the greatest and strongest people in the world. She will be able to whip the war-making nations with righteous example and gentle peace.

#### INDIANA CHILD'S CREED

Every child has the inalienable right to be born free from disease, free from deformity and with pure blood

in its veins and arteries.

Every child has the inalienable right to be loved; to have its individuality respected; to be trained wisely in mind, body and soul; to be protected from disease, from evil influences and evil persons; and to have a fair chance in life. In a word, "to be brought up in the fear and admonition of the Lord."

That state is delinquent which does not ceaselessly strive to secure these inalienable rights to its children.

## RURAL SCHOOL HYGIENE IN MICHIGAN

BURTON S. TEFFT, Saginaw, Mich.

This is an abstract of a paper read before the Fourth International Hygiene Congress, Buffalo, N. Y., 1914. I don't think dentists or dentistry is mentioned once, but it is interesting and very readable. Mouth hygiene is only a branch of general hygiene, and we should be broad enough to enjoy a paper treating of other things than dentistry.

In one rural school in which I taught there were four brothers attending. Their ages at that time were six, eight, ten and twelve years respectively, or thereabout. They brought their dinners, or lunches, in one basket. But the older brothers made complaint that the younger ones ate all the food before the noon hour and left them with nothing to eat, when the proper time came for eating. I sent word to the mother, a stepmother, to put the boys' dinners into separate baskets, thinking it would prevent them from eating one another's lunches and getting

into trouble over their noon meal. The mother did as I suggested, but the complaints did not cease coming in from the larger brothers and from other pupils, too. I investigated further and I found that each boy had in his pail for his dinner; dinner for a hungry, growing, poorly clothed boy, one single biscuit, a cross between poor bread and hardtack. This was divided into two pieces and had some meat grease or some meat between the pieces, and that was all they did have. Do you wonder that other pupils missed food from their lunch baskets?

A teacher made this report to me: She had a pupil, a boy ten or twelve years of age, who went home from school at noon for his dinners. On several occasions he failed to appear in the afternoon sessions of the school. The teacher told him he must not stay out of school in that way or she would be compelled to refuse him the privilege of going home at noon. He promised to do better, but almost the very next day he was absent from school in the afternoon. The following morning he appeared with no dinner and was allowed to go home only after he had agreed to come back as soon as he had eaten his dinner. The afternoon came, but no boy appeared according to the terms of the agreement. Can you imagine the thoughts that invaded the mind of that teacher at this stage of the game? The next morning the boy was at school again as usual, and you may be assured that the teacher met him when he came in, too. She reminded him of his promise and demanded of him the reason he had for not living up to his part of the agreement, and the demand had some force behind it I want to say to you. The answer came; for the boy, half frightened and half sobbing confessed, "I didn't have no dinner, teacher, and so I couldn't come," and the worst part of the answer was he told the truth.

I have had several cases in

schools where I taught, and several cases reported to me by my teachers, of pupils coming to school actually filthy, and repulsive from this cause. Cases of children having comparatively good clothing and shoes on entering school in the fall, but who apparently did not change clothes till they were completely worn out and unwearable, and who showed no evidence of any kind of having had a bath from summer to summer. I recall the story of two boys who went on an outing to the lake, given by the philanthropic people of the city to children unable to take an outing by any other means. The boys hurried down to the lake and made preparation to take a plunge at once. When they began to divest themselves of their scanty clothing, one of the boys eyed his companion quite closely and exclaimed, "Gee, Jim, but you are awful dirty." His chum replied, "Yes, I know, but you see, last year I missed the train."

I visited one of the schools of my county several years ago and found this condition: On observing the personal appearance of pupils I noticed that nearly every pupil, if not every one, was sitting with eyes somewhat closed and squinting. I noticed, also that many seemed to have some trouble with their eyes. They were wiping them frequently and their eyes looked inflamed and bad. I went into the rear of the room and sat down, wondering what



could cause such a generally bad condition of the pupils' eyes. I think the causes were evident; for the pupils sat facing two large, unshaded windows and were compelled to look in that direction most of the day during school hours.

The blackboards were fully three feet from the floor and had a poor but reflecting surface. The windows were on the right-hand side and in the front of the room. The walls had been a shade of pink, but were very dark at that time. The teacher's desk was on a platform by the two front windows, which compelled the children to look upward when in the class as well as to look directly into the light. I believe it was the worst condition I have ever met in school room lighting. The heating and ventilating were about the same. I asked the Board to change the seating in order to change the light effect, and they did as I suggested. There is but little eye trouble to be found in the school now. There were other factors that contributed to the bad eye condition, no doubt, but I am certain the elements I have just named did a large part in making this condition.

I found in another school room that had been recently redecorated by order of the district voters and board that the colors used were cream color and bright red. The body of the walls and ceiling

was tinted with the cream color and the trimming was of the red. I felt as though a thousand spears had been thrust into my eyes, when I first entered the room. The contrast was too sharp. Of course one would get accustomed to the colors, after being in the room for a time. But the point I wish to make is the utter disregard of harmony and appropriateness in colors, when the matter of decorating the interior of a school room is being considered. This is a prime factor in school room conditions, I am sure.

We still have in my county, school buildings with windows on four sides, or three sides, instead of on but one side or two at the most; and having no provision for any kind of ventilation except doors and windows. School rooms that receive a thorough cleaning but once in a year, and some that "miss the train" occasionally. Not all are like these, for we have some buildings which are the reverse, being modern buildings and well kept and furnished. Practically up-to-date school buildings in every respect. But these extreme cases are the ones first to attract our attention. The pupils in the unfavorable districts are entitled to as good school opportunities as any other children, if they are to become a part of the state and nation and intelligently perform their duty to them.

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